



Volunteer Lake Assessment Program Individual Lake Reports

SKATUTAKEE, LAKE, HARRISVILLE, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	11,200	Max. Depth (m):	6.2	Flushing Rate (yr ⁻¹)	8.3	Year	Trophic class	KNOWN EXOTIC SPECIES
Surface Area (Ac.):	261	Mean Depth (m):	2.9	P Retention Coef:	0.46	1988	MESOTROPHIC	
Shore Length (m):	6,100	Volume (m ³):	3,044,500	Elevation (ft):	1202	2006	MESOTROPHIC	

TROPHIC CLASSIFICATION

KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	Chlorophyll-a	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
Primary Contact Recreation	E. coli	Encouraging	>2 samples exist that are > 75% of geometric mean criteria, but not enough samples to calculate geometric mean. No single sample exceedances. More data needed.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	14.2	Barren Land	0.03	Grassland/Herbaceous	0.01
Developed-Open Space	2.17	Deciduous Forest	33.73	Pasture Hay	1.57
Developed-Low Intensity	0.31	Evergreen Forest	10.55	Cultivated Crops	0.04
Developed-Medium Intensity	0.03	Mixed Forest	34.67	Woody Wetlands	2
Developed-High Intensity	0	Shrub-Scrub	0.09	Emergent Wetlands	0.44



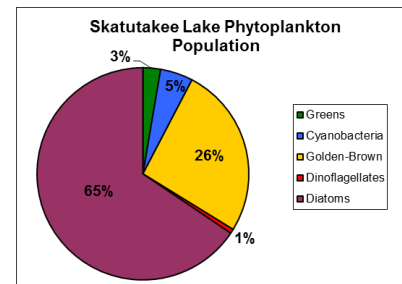
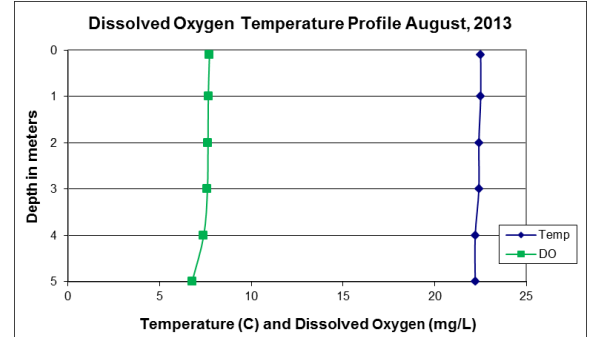
VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

SKATUTAKEE LAKE, HARRISVILLE, NH

2013 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphics)

- CHLOROPHYLL-A:** Chlorophyll levels decreased from a spike in 2012 and were average for NH lakes. Historical trend analysis indicates relatively stable chlorophyll with low variability between years.
- CONDUCTIVITY/CHLORIDE:** Conductivity was low and less than the state median at all stations except for Spring Brook. Spring Brook conductivity and chloride were slightly elevated indicating a potential impact from winter road maintenance. Historical trend analysis indicates stable epilimnetic conductivity with low variability between years.
- E. COLI:** Spring Brook and Outlet E. coli levels were low and much less than the state standard for surface waters. Goose Brook E. coli levels were elevated in July likely from the two families of geese present during sampling.
- TOTAL PHOSPHORUS:** Deep spot and tributary phosphorus levels were low on each sampling event and less than the state median. Historical trend analysis indicates significantly decreasing (improving) epilimnetic phosphorus since monitoring began. We hope to see this continue!
- TRANSPARENCY:** Transparency was stable throughout the summer however decreased slightly from 2012, and was slightly lower than the state median. Historical trend analysis indicates relatively stable transparency with moderate variability between years.
- TURBIDITY:** Deep spot and tributary turbidity were relatively low throughout the summer.
- pH:** Deep spot and tributary pH levels were slightly less than the desirable range of 6.5 – 8.0 units. Historical trend analysis indicates stable epilimnetic pH with low variability between years.
- DISSOLVED OXYGEN:** Dissolved oxygen levels were high throughout the water column and sufficient to support aquatic life.
- RECOMMENDED ACTIONS:** The stable and improving water quality trends are a positive sign. The increased frequency and intensity of storm events highlights the importance of managing stormwater runoff in the watershed. Educate lake and watershed residents on ways to manage stormwater runoff from their properties utilizing DES' "Homeowner's Guide to Stormwater Management". Keep up the great work!



NH Median Values: Median values for specific parameters generated from historic lake monitoring data.

Alkalinity: 4.9 mg/L

Chlorophyll-a: 4.58 mg/m³

Conductivity: 40.0 uS/cm

Chloride: 4 mg/L

Total Phosphorus: 12 ug/L

Transparency: 3.2 m

pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.

Chloride: < 230 mg/L (chronic)

E. coli: > 88 cts/100 mL – public beach

E. coli: > 406 cts/100 mL – surface waters

Turbidity: > 10 NTU above natural level

pH: 6.5-8.0 (unless naturally occurring)

Station	Alk.	Chlor-a	Chloride	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	#/100ml	ug/l	NVS	VS	ntu	
Epilimnion	2.20	4.65		29.9		9	2.36	2.81	0.95	6.29
Hypolimnion				30.0		10			1.35	6.25
Goose Brook				26.0	277	7			0.75	6.10
Outlet				29.0	10	7			0.79	6.35
Spring Brook			24	104.2	10	5			0.21	6.43

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
pH	Stable	Trend not significant; data show low variability.	Chlorophyll-a	Stable	Trend not significant; data show low variability.
Conductivity	Stable	Trend not significant; data show low variability.	Transparency	Stable	Trend not significant; data moderately variable.
			Phosphorus (epilimnion)	Improving	Data significantly decreasing.

